View results

Respondent

1 Tim Mies

42:48

Time to complete

Final Project Report

1. Date of this final project report submission *

9/17/2024

2. Name of project exactly as it was listed in your award letter *

Agrivoltaics at the Energy Farm

3. Date (or semester/year) of original award letter *

Fall 2023

4. Expiration date of award as listed on original award letter or approved scope change letter - whichever is more recent *

December 3rd, 2025

5. Enter the amount of the award, including any budget increases as a result of a previous scope change. *

71,500

6. How much (in dollars) of your award (including previous approved budget increases) is remaining? *

0

7. Briefly describe the goals of your project. *

This Agrivoltaics project started out in early 2023 with the goal of creating shade on agricultural crops to meet researchers needs, but funding was only available to erect the structure and create the shade. A complete project, if funded, will purchase equipment and labor to connect the panels back to the campus grid.
The solar panels for this project were previously supplying electricity as part of a research project that had come to completion at the Research Building Council on campus. When the decaying building supporting these panels was razed, the Energy Farm jumped at the opportunity to repurpose / recycle these panels for our new research project.
When complete, solar electricity production will be expanded on the Energy Farm. Metering installed would match campus standards for data collection, allowing a consistent record of production in alignment with the other solar and renewable projects available on the iCAP portal as part of the overall campus carbon action plan.

8. Did you complete your project (i.e., as it was outlined in the original award letter or in a subsequent approved scope change)? *

- (●) Yes, the project was completed as outlined.
- ( ) No, the project was not complete as outlined.

9. On what date did you complete the project? *

6/15/2024

10. Describe, in detail, the challenges / obstacles your project faced. *

Several details were missed in the original engineered package for the contractor. This led to delays and minor change orders to correct the omissions. Despite the change orders, the overall contract stayed within the proposed budget from F&S.
Second, field drainage tiles that were unknown in the area of work were damaged and required repairs. Due to these repairs (funded outside of this project) the overall drainage of these fields were improved which has sustainability benefits by controlling rainwater flooding.

11. Describe, in detail, the successes your project experienced. *

The project success in identifiable in the power generated by the solar panels now feeding into the campus grid, contributing toward the campus supply of renewable energy.

12. Describe, in detail, how your project addressed sustainability. *

This project was closely tied to another renewable energy project currently underway, a geothermal test / demonstration system which started construction Spring 2023 and completed Spring 2024. The geothermal project is replacing a propane based HVAC system for the Energy Farm office space. The propane fossil fuel will be eliminated, with electricity as the energy needed for the geothermal heating/cooling system. By connecting the 15kw solar array to the campus grid, the Energy Farm is providing electricity in excess of what the geothermal system needs. Both of these projects are jointly displayed on a kiosk / web display tying the performance of both systems together.
https://egauge63556.d.egauge.net/65E25/classic.html

13. Describe, in detail, how your project integrated student involvement and community outreach. *

The first part of the solar array installation was installed in 2023, and provided the opportunity for student participation in the assembly of the solar structure. This second portion, the actual electrical installation was not able to have the same involvement due to liability rules.
Community outreach has already been an integral part of this project, as in July/Aug 2024 10+ groups toured the energy farm including this agrivoltaics installation.

14. Describe how the project engaged individuals from underrepresented groups and/or how it promoted diversity, equity, and inclusion. *

As mentioned in the community outreach section, campus summer camps and visitors regularly have underrepresented groups as part of their mission. By presenting renewable energy projects such as this one in tours, we hope to spark an interest that can impact their future educational and life experiences.

15. What key takeaways should the campus community know about your project? *

This project was completed over several phases and several years, funded by multiple sources to not only augment research into Agrivoltaics (the co-existence of agriculture and solar), but also recycle solar panels that would have left campus, and finally producing power onto the campus grid.

16. Describe the marketing material developed for promotion of your project, including but not limited to advertising (including digital) and/or signage related to this project. All marketing must include SSC's logo and/or a statement of which fee funded the project. Projects must coordinate with SSC to ensure the promotion appropriately highlights the SSC's contributions to the project. *

Announcements of the status and completion of this project was coordinated through iSEE and also a web portal (link previous above) that shows the real time and long term status of this installation. Acknowledgements (verbal and written) are included in all outreach activities for the involvement and support of SSC / Illinois Green Fund.

17. Upload project marketing and/or media not previously submitted in semester progress reports. *

Image File_Tim Mies.pdf

18. Complete and upload the final financial documentation for your project. You should reflect all expenditures since your last semester project report. We strongly suggest that you also upload supporting financial documentation from Banner for your award's CFOP. Any remaining funds will be transferred back to the SSC. It is the sponsoring department's responsibility to close the CFOP after the account is at a zero balance.

Add link for SSC-Budget-Timeline_FINAL PROJECT REPORT_template file *

SSC-Budget-Timeline-FINAL-PROJECT-REPORT-Sola_Tim Mies.xlsx